


Form PTO-1390 (REV 11-98)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 160383.90244
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 09/936256
INTERNATIONAL APPLICATION NO. PCT/FR00/ 00632	INTERNATIONAL FILING DATE 16 Mar 2000 (16.03.00)	PRIORITY DATE CLAIMED 16 Mar 1999 (16.03.99)	
TITLE OF INVENTION Business Machine with Paper Roll Printer			
APPLICANT(S) FOR DO/EO/US Patrick Favre and Laurent Brac de la Perriere			
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"><input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.<input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.<input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).<input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.<input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))<ol style="list-style-type: none"><input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).<input checked="" type="checkbox"/> has been transmitted by the International Bureau.<input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)<input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).<input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))<ol style="list-style-type: none"><input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).<input type="checkbox"/> have been transmitted by the International Bureau.<input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.<input type="checkbox"/> have not been made and will not be made.<input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).<input checked="" type="checkbox"/> An <u>unsigned</u> oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).<input checked="" type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 11. to 16. below concern document(s) or information included:</p> <ol style="list-style-type: none"><input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.<input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.<input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.<input type="checkbox"/> A substitute specification.<input type="checkbox"/> A change of power of attorney and/or address letter.<input checked="" type="checkbox"/> Other items or information: Return postcard.			

U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 09/936256		INTERNATIONAL APPLICATION NO. PCT/FR00/00632		ATTORNEY'S DOCKET NUMBER 160383.90244	
17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1000.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	6 -20 =	0	X \$18.00	\$	
Independent claims	1 -3 =	0	X \$80.00	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$270.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$	
Reduction by 1/2 for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				\$	
SUBTOTAL =				\$	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.429(f)).				+ \$	
TOTAL NATIONAL FEE =				\$	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+ \$	
TOTAL FEES ENCLOSED =				\$ 860.00	
				Amount to be:	
				refunded	\$
				Charged	\$
a. <input type="checkbox"/> A check in the amount of \$ <u> .00 </u> to cover the above fees is enclosed. b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>17-0055</u> in the amount of \$ <u> .00 </u> to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>17-0055</u> . A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Michael J. McGovern Quarles & Brady LLP 411 East Wisconsin Ave. Milwaukee, WI 53202-4497			<div style="text-align: center;">  SIGNATURE <u>Michael J. McGovern</u> NAME <u>28,326</u> REGISTRATION NUMBER </div>		

00/936256

JCO3 Recd TO 07 SEP 2001

Express Mail No. EL 868 813 217 US

PATENT

Docket No.160383.90244

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Favre
Appl. No.: National Phase of PCT/FR00/00632
Filed: Herewith
For: BUSINESS MACHINE WITH PAPER ROLL PRINTER

PRELIMINARY AMENDMENT

BOX PATENT APPLICATION
Commissioner for Patents
Washington, D.C. 20231

Sir:

Please enter the following preliminary amendment in the patent application transmitted herewith prior to calculation of the filing fee.

Amendment

IN THE SPECIFICATION:

Page 1, before line 1, insert and center the heading
(New) BACKGROUND OF THE INVENTION

Page 1 (as amended in the PCT phase), please delete the last paragraph and insert:

(New) SUMMARY OF THE INVENTION

The invention is concerned with an office machine having a lid and a skirt ensuring that when the lid is in the open position for positioning a paper roll (12), the roll is guided, when the lid is in the open position, the chassis is sealed, and when the lid is closed, the lid is being closed, the lid is cushioned.

Page 2 (as amended in the PCT phase), after the second full paragraph and before the third full paragraph insert and center the heading:

(New) BRIEF DESCRIPTION OF THE DRAWINGS

Page 2 (as amended in the PCT phase) after the third full paragraph and before the fourth full paragraph insert and center the heading:

(New) DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

IN THE ABSTRACT:

Please delete the reference to Figure 1.

IN THE CLAIMS (as amended in PCT phase):

Please amend claims 3, 5 and 6 as follows:

3. (Amended) Office machine in accordance with claim 1, in which, in its closed position, the lid (3) is designed to allow cooperation between the head (2) of the printer and a roller (4) for driving the paper.

5. (Amended) Office machine in accordance with claim 1, in which said skirt (32) is an elastic skirt designed to lie flat under constraint on the wall of the chassis (1) when the lid (3) is in the closed position.

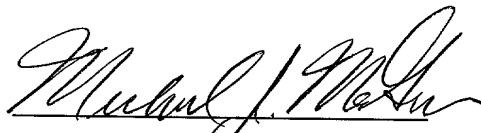
6. (Amended) Office machine in accordance with claim 1, in which the chassis (1) and the lid (3) have two respective edges (14, 34) designed, with lid (3) in the closed position, to delineate an outlet slot for printed paper (12).

Remarks

The specification has been amended to insert headings at the proper places. The claims have been amended to remove multiple claims dependencies for purposes of calculating the filing fee.

Respectfully submitted,

By:



Michael J. McGovern
Quarles & Brady LLP
411 East Wisconsin Avenue
Milwaukee, WI 53202-4497
(414) 277-5000
Attorney of Record

Amended Claims with Changes Marked

3. (Amended) Office machine in accordance with [either of claims 1 and 2] claim 1, in which, in its closed position, the lid (3) is designed to allow cooperation between the head (2) of the printer and a roller (4) for driving the paper.

5. (Amended) Office machine in accordance with [any of the claims 1 to 4] claim 1, in which said skirt (32) is an elastic skirt designed to lie flat under constraint on the wall of the chassis (1) when the lid (3) is in the closed position.

6. (Amended) Office machine in accordance with [any of the claims 1 to 5] claim 1, in which the chassis (1) and the lid (3) have two respective edges (14, 34) designed, with lid (3) in the closed position, to delineate an outlet slot for printed paper (12).

Office machine with paper roll printer

The invention concerns office machines which have a printer associated with a roll of paper. Examples of this type of office machine are a fax machine or a portable payment terminal.

The roll of paper is received into a housing closed by a lid hinged on the machine chassis. When there is no more paper, the lid is opened and a replacement made.

Two types of such office machines are known.

In the first type, the motor and the control mechanism of a roller for driving the paper in front of the printing head by friction form a single-piece unit. The positioning of the paper is awkward because its leading edge has to be inserted into a slot giving access to the drive roller and to the head. It is therefore necessary to have both hands free and therefore to put the machine down, in the case of a payment terminal.

In the second type, some of the components of the mechanism are integral with the lid and, being therefore mobile, they thus offer better access for replacement of the paper in its housing and for achieving cooperation between the leading edge and the head. However, at each replacement, the re-meshing of the toothed wheels between the fixed part and the moving part of the mechanism causes those parts to wear. In addition, the mechanism is not fully protected and there is a risk of damage during handling or as a result of polluting particles getting in.

The present invention aims to avoid these disadvantages.

To that end, the present invention concerns an office machine which has a paper roll printer in a chassis, with a housing for the paper roll, means of driving the roll and a lid for closing the housing, characterised by the fact that the drive means are mounted on the lid.

Thus all the moving parts for driving the paper form one unit and are therefore not very susceptible to external stresses. In addition, when the lid is in the open position, the mechanism is well removed from the printing head thus giving free access to it, so that the leading edge of the paper may easily be engaged by the head.

The invention will be better understood with the aid of the following description of a preferred embodiment of the office machine of the invention, with reference to the appended drawing, in which:

- figure 1 is a lateral view in section representing the printing part of a portable payment terminal according to the invention, with a housing, for a roll of printing paper, and a lid which, carrying a mechanism for driving the paper, is in the open position,
- figure 2 corresponds to figure 1 but the terminal is here ready for printing, with the lid in the closed position, and
- figure 3 is a perspective view representing the lid and the paper-driving mechanism mounted thereon.

The payment terminal partially represented in figure 1 has a printing head 2, mounted within a chassis 1, on a spring 21, the chassis 1 receiving a lid 3 for closing the housing 10 of a roll 12 of printing paper.

The lid 3 is mounted so that it moves upon the chassis 1, and, in this example, pivots on the latter about a theoretical axis 31, the corresponding mechanical link being constituted, at each end of the axis 31, by the nesting of male and female cylindrical parts.

In a variation, the lid 3 could be totally detachable from the chassis 1, in the manner of a refill or a removable cartridge holding paper to be used, and could be attached there by a snap-fit device with guide rails if appropriate to facilitate the positioning of the lid.

The lid 3 is integral with a mechanism for driving the paper 12 in front of the head 2, of which only one friction-drive roller 4, with counter pressure applied on the head 2, is represented in figures 1 and 2. With the lid 3 in the open position, the above mechanism mounted on the lid 3 is distant from the head 1 and frees access to the housing 10 for the positioning of a replacement roll of paper 12 in it. The head 2 is then accessible, and all that is required is to pull the leading end of the roll of paper 12 and to place it in front of the head 2, against which it is then flattened by the drive roller 4 when the lid 3 is closed.

In a general way, the terminal is therefore in two parts which move one in relation to the other and are designed to house the roll of paper 12 and to permit its replacement. The lid 3 is in fact an auxiliary chassis carrying the mechanism 4, 5, 6 (fig. 3) and which, for preference as in this case, forms a sealed wall closing the chassis 1.

Figure 2 illustrates the operational position of the drive roller 4, forming a point of counter-pressure with the head 2 to press and drive the paper 12 by friction.

Figure 3 represents the drive mechanism for the paper 12, carried on the lid 3,

in greater detail. It consists of a stepper motor 6 controlling a system of gears 5 the last of which causes the drive roller 4 to rotate.

In this example, the roll 12 does not rest upon the base of the housing 10 but is supported by a spindle 11 end mounted to rotate on two bearings carried by two opposed lateral flanges of the lid 3, only one of the bearings, 33, being represented.

In order best to protect the mechanism 4, 5, 6, and in particular the electrical connections of the motor 6, against the intrusion of polluting particles and against wear, the lid 3 has a skirt 32 opposed, in relation to the axis 31, to the rest of the lid 3 which carries the mechanism 4, 5, 6. As figure 1 shows, in the open position ready for loading, the skirt 32 projects towards the interior of the chassis 1 and occupies a position situated at the limit of the housing 10, under the paper roll 12, and serves as a support or guide facilitating the positioning of the roll 12. With the lid 3 in the closed position, the skirt 32 is closed against the inner face of the chassis 1 and thus ensures the seal of the chassis 1 in this area.

In the closed position shown in figure 2, the edge 34 of the lid 3 here parallel to the axis 31 and situated close to the drive roller 4 forms an abutment point resting against an opposite abutment edge 14 of the chassis 1, which regulates the relative positions of the head 2 and of the drive roller 4. This therefore regulates the cooperation between the head 2 and the roller 4 to the force or pressure required to drive the paper 12 pressed between them by friction, without slipping and without excessive constraint.

In this example, the abutment of the opposed edges 14 and 34 occurs solely at the axially opposed ends of the edges 14 and 34, that is to say that, at each end,

one at least of the edges 14 and 34 has a protrusion, not drawn, which forms a spacer. The two above protrusions are axially spaced apart by a distance slightly greater than the width of the paper 12. For this reason, the central zones of the opposed edges 14 and 34 are, in the closed position, facing each other and not far apart and delineate an outlet slot for the paper 12, downstream of the printing head 2.

In order to prevent too harsh an impact of the moveable abutment edge 34 upon the fixed edge 14, an elastic shock-absorbing component may be provided such as a tongue or skirt with an elastic abutment opposing elastically the closing of the lid 3. This could be a skirt integral with the chassis 1 and against which the lid 3 or any component carried thereon would abut. In this example, the elastic skirt is however integral with the lid 3 and, specifically, consists of the sealing skirt 32, which thus serves two purposes. The elastic distortion of the skirt 32 which occurs when the lid 3 is completely closed, absorbs a surplus of kinematic energy from the closing of the lid 3 and thus limits any impact of the lid 3 upon the chassis 1. A releasable mechanism holding the lid 3 in the closed position is then provided, for example a latching device. The release of the latching device thus automatically opens the lid 3, at least partially, thanks to the energy stored in the skirt 32.

Protection of the mechanism 4, 5, 6 is furthermore ensured here by an assembly casing 7, mounted on the lid 3 and shown only by broken lines indicating where it is mounted onto the latter, the casing 7 impermeably surrounding the gears 5 and even in this case the motor 6. The drive roller 4, or at least a sensor for contact with the head 2, is however accessible.

CLAIMS

1. – Office machine which has a paper roll printer within a chassis (1), with a housing (10) for the roll of paper (12), a lid (3) for closing the housing (10), mounted so that it moves upon the chassis (1) between an open position of the housing (10) and a closed position of the housing (10), and means (4, 5, 6) for driving the roll (12) which are mounted on the lid (3), characterised by the fact that the lid (3) is designed to support the roll of paper (12) and has a skirt (32) ensuring,

- i) when the lid (3) is in the open position for positioning a paper roll (12), the guiding of the roll,
- ii) when the lid (3) is in the closed position, the seal of the chassis (1),
- iii) when the lid (3) is being closed, the cushioning of the lid.

2. – Office machine in accordance with claim 1, in which the lid (3) is mounted to pivot on the chassis (1) about an axis (31) and the said skirt (32) is opposite, in relation to the axis (31), to the rest of the lid (3) upon which are mounted the means (4, 5, 6) for driving the roll.

3. – Office machine in accordance with either of claims 1 and 2, in which, in its closed position, the lid (3) is designed to allow cooperation between the head (2) of the printer and a roller (4) for driving the paper.

4. – Office machine in accordance with claim 3, in which the chassis (1) and the lid (3) have means of abutment (14, 34) to regulate a pressure applied between the head (2) and the drive roller (4).

5. – Office machine in accordance with any of claims 1 to 4, in which the said skirt (32) is an elastic skirt designed to lie flat under constraint on the wall of the chassis (1) when the lid (3) is in the closed position.

6. – Office machine in accordance with any of claims 1 to 5, in which the chassis (1) and the lid (3) have two respective edges (14, 34) designed, with the lid (3) in the closed position, to delineate an outlet slot for the printed paper (12).

**DECLARATION AND POWER OF ATTORNEY
FOR DESIGN AND UTILITY PATENT APPLICATION**

ATTORNEY'S DOCKET NO.:

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled BUSINESS MACHINE WITH PAPER ROLL PRINTER
the specification of which (check one) ☒ is attached hereto, ☐ was filed on 09/07/2001 as Application No. 09/936,256 and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed: _____

99 03208

FRANCE

16 MARCH 1999

Priority Claimed

☒ Yes ☐ No

(Number)

(Country)

(Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

(Application No.)

(Filing Date)

I hereby claim benefit under Title 35, United States Code § 120 of any United States application(s) listed below, and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided in the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

PCT/FR00/00632

16 MARCH 2000

(Application No.)

(Filing Date)

(Status - patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and all continuation and divisional applications based thereon, and to transact all business in the Patent and Trademark Office connected therewith: Michael J. McGovern, Reg. No. 28,326; Michael A. Jaskolski, Reg. No. 37,551. Direct all telephone calls to Michael J. McGovern at telephone no. (414) 277-5000. Address all correspondence to: Michael J. McGovern c/o Quarles & Brady, 411 East Wisconsin Ave., Milwaukee, WI 53202-4497.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

FULL NAME OF SOLE OR FIRST INVENTOR

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INVENTOR'S SIGNATURE

DATE

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INVENTOR'S SIGNATURE

DATE

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INVENTOR'S SIGNATURE

DATE

RESIDENCE

CITIZENSHIP

POST OFFICE ADDRESS

FULL NAME OF FIFTH JOINT INVENTOR

INVENTOR'S SIGNATURE

DATE

RESIDENCE

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INVENTOR'S SIGNATURE

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FULL NAME OF SEVENTH JOINT INVENTOR

INVENTOR'S SIGNATURE

DATE

RESIDENCE

CITIZENSHIP